



Grade	Code	AISI	Austenitic Stainless Steel
1.4305	X8CrNiS18-9	303	

Steel Properties

1.4305 grade derivative suitable for machining, classified as stainless automatic steel with increased concentration of Sulphur and Carbon. AISI 303 is distinguished from the basic grade by its lack of resistance to intergranular corrosion in delivery and sensitized condition. The purpose of the change is to facilitate machining, improve chip brittleness due to the release of Sulphides during the process. 1.4305 with slightly worse corrosion resistance than AISI 304 / 1.4301 due to relatively high carbon content.

Chemical Composition (1.4305)

C %	P %	Si %	Mn %	S %	Cr %	Mo %	Ni %	Cu %	W %
0,10 max.	0,045 max.	1,00 max.	2,00 max.	0,15 – 0,35	17,00 – 19,00	-	8,00 – 10,00	1,00 max.	-

Mechanical Properties

Rp0.2, Mpa	Rm, Mpa	Elongation [%]	Hardness [HB]
≥ 190	500 – 700	≥ 35	< 230

Suitable For

Applications include aircraft fittings, gears, nuts and bolts, electrical switchgear components, bushings and shafts. Main application areas are the automotive industry, mechanical engineering, fittings for medium corrosive stresses, electronic equipment, parts for the food industry.

Remarks

Specification

AISI 303, 1.4305, X8CrNiS18-9